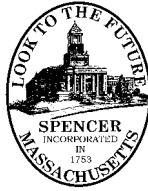


**TOWN OF SPENCER, MASSACHUSETTS**  
**OFFICE OF THE**  
**SEWER COMMISSION**



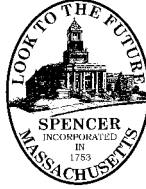
**RESIDENTIAL, COMMERCIAL, INDUSTRIAL and MUNICIPAL**  
**SEWER PERMIT APPLICATION CONTRACTOR'S INSTRUCTIONS**

1. A Plumbing Permit and inspection is needed for all sewer pipe work done on private property from that portion of the plumbing system consisting of all building drains beginning from a point ten feet outside from the inside face of the foundation wall and running into the building structure; and shall be installed by a licensed plumber only per 248 CMR: 10.00: Plumbing.
2. A licensed drainlayer is required for all work done commencing from the outside end of the licensed plumber's work jurisdiction.
3. The exception to 248 CMR: 10.00: Plumbing is that jurisdiction of the plumbing code ends at the private/public property line, in which case the drainlayer is authorized to do all work on public property

**TOWN OF SPENCER, MASSACHUSETTS**  
**OFFICE OF THE**  
**SEWER COMMISSION**

FRANCIS X. WHITE, CHAIRMAN  
LAWRENCE H. DUFAULT, CLERK  
MICHAEL J. MERCADANTE, MEMBER

JAMES T. LAPLANTE, JR, SUPERINTENDENT



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SPENCER, MA 01562  
TEL. 508-885-7541  
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PLANT 508-885-7542

**RESIDENTIAL, COMMERCIAL, INDUSTRIAL and MUNICIPAL**  
**SEWER PERMIT APPLICATION**  
**(SINGLE SERVICE CONNECTION)**  
(Version 1)

The undersigned Owner/Applicant or Authorized Agent of Owner/Applicant, and a duly authorized licensed drain layer in the Town of Spencer, hereby request a Sewer Permit to furnish, install, connect and test a new building sewer service line or repair and test an existing building sewer for the property stated below:

<hr style="border-top: 1px solid black;"/> <div style="text-align:center">(Number &amp; Street Address of Service)</div>	<p>This Permit is for the connection of a</p> <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> Residential    <input type="checkbox"/> Industrial</div><div><input type="checkbox"/> Commercial    <input type="checkbox"/> Municipal    building owned by</div></div>
<hr style="border-top: 1px solid black;"/>	
(Property Owner/Applicant)	(Number & Street Address)
No. of Residences Served <hr style="display: inline-block; width: 150px; border: none; border-bottom: 1px solid black;"/>	No. of Structures <hr style="display: inline-block; width: 150px; border: none; border-bottom: 1px solid black;"/>
No. of Bedrooms/Structure <hr style="display: inline-block; width: 150px; border: none; border-bottom: 1px solid black;"/>	Type of Com./Industry <hr style="display: inline-block; width: 150px; border: none; border-bottom: 1px solid black;"/>
Total Flow, GPD <hr style="display: inline-block; width: 150px; border: none; border-bottom: 1px solid black;"/>	Failed Septic System: <input type="checkbox"/> YES <input type="checkbox"/> NO

In consideration of the granting of this Sewer Permit, the licensed drain layer and Owner/Applicant agree:

- That the sewer service connection and building sewer service line conveys flow from only a single family house, commercial building or industrial building and does not convey flows from more than one lot, a private subdivision, an apartment complex or a pressure line and lift pump(s) that would require, from the Spencer Sewer Commission's perspective, the Owner/Applicant to procure the design services of an engineer licensed in the Commonwealth of Massachusetts (herein called "Engineered Projects").
- To accept and abide by all provisions of the Regulation of Sewer Use construction specifications and test and inspection reports adopted by the Spencer Sewer Commission (SSC). Copies are available at the Sewer Department Office upon request. Sump pumps, foundation drains and downspouts are prohibited from being discharged into the sewer system.
- To comply with all local, state and federal regulations, which apply to the proposed development.

**RESIDENTIAL, COMMERCIAL, INDUSTRIAL and MUNICIPAL  
SEWER PERMIT APPLICATION  
(SINGLE SERVICE CONNECTION)**

(Version 1)

- To pay all connection and inspection fees at the time of submitting this Sewer Permit Application. Obtain and pay for any road opening permits or conservation/wetland permits and fees and a copy (s) of same must be submitted with this Application.
- This Sewer Permit Application is not valid until the Owner/Applicant or Authorized Agent<sup>1</sup>, licensed drain layer and Sewer Department have dated and signed at the bottom of page 4 of 4.
- To obtain a new Sewer Permit and pay associated fees, to be determined by the SSC, if building sewer service line is not completed, inspected and connected to the sewer main within ninety (90) days.
- To pay sewer user charges beginning from the date of connection to the Spencer Sewer System, whether connection is accepted or not. The minimum charge will apply if there is no sewage flows from the building.
- To notify the Spencer Wastewater/Sewer Department Superintendent when the building sewer service line is ready for inspection and connection to the Spencer Sewer System. Inspection(s) must be made before any portion of the work is covered or the connection is made or the Owner/Applicant will be required to uncover.
- To install an exterior grease trap on the building sewer service line from a commercial building identified by the Spencer Sewer Commission as being a restaurant, sandwich shop or other similar food preparation and/or food service establishment.
- To have the drain layer file the attached As-built Sanitary Sewer Service Location Report showing the location of the existing sewer main, the new or repaired service connection, the building location and route of the building sewer service line. The Report should also include: the total length, type, diameter and depth of service line at the building and at the sewer main; connection at sewer main; pipe location ties at the foundation and sewer main; and the sewer main's connection distance from the nearest manholes on both sides.
- To furnish, install and test PVC SDR 35 building sewer line and fittings for gravity sewer service lines. Furnish, install and test DR 11 fused PE pipe and fittings for pressure lines. Alternate pipe and fittings for pressure lines may be used at the sole discretion of the Spencer Sewer Commission. If any part of the gravity building sewer is to be run under a driveway or parking area use Sch 40 PVC and the cover must be 3' minimum. Copies of the construction specifications and test and inspection reports are available at the Sewer Department Office.
- To furnish and install joints for both gravity pipe and fittings with integral bells, consisting of an integral wall section with a solid cross section rubber ring, factory assembled and securely locked in place to prevent displacement. The lubricant used for joint assembly will have no detrimental effect on the rubber ring or pipe.

**RESIDENTIAL, COMMERCIAL, INDUSTRIAL & MUNICIPAL  
SEWER PERMIT APPLICATION  
(SINGLE SERVICE CONNECTION)**

(Version 1)

- To furnish and install, for a single-family home, a minimum 6-inch diameter gravity building sewer service line. The building sewer service will be laid on a uniform slope without dips or rises from the building to the point of connection at the sewer main. If the line cannot be laid along a uniform grade then a grinder pump and a pressure line will need to be designed, approved by the SSC and installed.
- To furnish and install a wye fitting on the building sewer service connections at the main line. Flexible couplings (Fernco) with stainless steel clamps shall only be used to connect a new building sewer service line to an existing building sewer line. New construction shall not use flexible couplings.
- To furnish, install and test a sanitary sewer manhole on the sewer main if a wye fitting is not used. Construct, test and inspect the sanitary sewer manhole in accordance with "Earthwork" and "Manholes, Covers and Frames Construction Specification" and complete and submit the required Manhole Inspection, Manhole Visual Observation, Manhole Testing and Manhole Inspection and Rehabilitation Reports. Copies of the construction specifications and test and inspection reports are available at the Sewer Department Office.
- To maintain and contain wastewater flow from existing building sewer service line and sewer mains at all times by bypass pumping around the section of service line or main sewer impacted by the new construction or by other methods approved by the Sewer Department.
- To furnish and install a minimum of six inches of  $\frac{3}{4}$ " stone bedding material below the building sewer service line. If the area under the line is wet over excavate an additional 6 inches and place a minimum of 12 inches of  $\frac{3}{4}$ " stone under the pipe. The building sewer service line will be backfilled to the centerline of newly laid pipe with  $\frac{3}{4}$ " stone. Backfill from the centerline of the pipe to subgrade or finished grade with clean fill material. Place and compact backfill material in 12" lifts using a Wacker mechanical vibratory compactor or comparable compactor. Copies of the construction specifications and test and inspection reports are available at the Sewer Department Office.
- That the cost of permitting, design, constructing and inspection shall be borne by the Owner/Applicant.
- That the granting of this Sewer Permit does not guarantee that the SSC will accept the Single Service Connection. After the work is completed, As-built information received and based on input from Sewer Department staff of the SSC may issue a letter of acceptance.

A connection fee of \$\_\_\_\_\_ was received by the Sewer Department on the date signed on page 4 of 4.

A sewer bank assessment of \$\_\_\_\_\_ was received by the Sewer Department on the date signed on page 4 of 4.

An inspection fee of \$\_\_\_\_\_ was received by the Sewer Department on the date signed on page 4 of 4.

**RESIDENTIAL, COMMERCIAL, INDUSTRIAL & MUNICIPAL  
SEWER PERMIT APPLICATION  
(SINGLE SERVICE CONNECTION)**

(Version 1)

Date Received: \_\_\_\_\_ Signed: \_\_\_\_\_  
(Sewer Department)

Title: \_\_\_\_\_

Date: \_\_\_\_\_ Signed: \_\_\_\_\_  
(Owner/Applicant or Authorized Agent<sup>1</sup>)

Date Connected: \_\_\_\_\_ Signed: \_\_\_\_\_  
(Licensed Drain Layer)

Date Connected: \_\_\_\_\_ Signed: \_\_\_\_\_  
(Sewer Department )

1. Provide written proof of authority from Owner to act on Owner's behalf.

Sewer Department Office - Original

Applicant/Owner - Copy

Drain Layer – Copy

# **SEWER BANK**

(Version 1)

## **BACKGROUND**

Sewered communities are constantly faced with the added burden that land development places on their sanitary sewer systems. Increases in real estate values and the availability of centralized wastewater collection and treatment facilities continue to spur on residential, commercial, industrial, and institutional development. Yet, frequently the municipal sewerage systems are old, having been designed for the flows that were envisioned fifty or more years ago. The Town of Spencer sewer system meets these conditions.

## **SOLUTION**

The solution is a multifaceted approach for removing Inflow/Infiltration (I/I) from poorly constructed or aging sewers and manholes. The removal approach combines all available technologies and programs including, but not limited to:

- Rehabilitation of the municipal sewer system (lines and manholes) using standard methods such as: testing and sealing/point repairs of joints; replacement of cracked or eroded pipe; rebuilding and raising manhole tops; and patching/sealing manholes. These approaches have had limited success in addressing long term removal of sewer infiltration and manhole inflow for a number of structural reasons (poor initial construction, age, frost impacts, poor subgrade, poor bedding, poor backfill, root re-intrusion, etc.). Rehabilitation methods will be used to resolve specific I/I problems on a case by case basis.

The Spencer Sewer Commission in 1987 conducted an MADEP/EPA funded construction project to address sewer and manhole conditions. The Spencer Sewer Commission in 1990 conducted a follow up Inflow/Infiltration Study to verify the success of the rehab program and identify areas of the municipal sewer system still impacted by infiltration and inflow.

- The Town of Spencer has miles of vitrified clay pipe sewer. Vitrified clay pipe sewers have known infiltration impacts that have not been successfully addressed by test and point repair rehabilitation methods. A removal and replacement program is the best program to address the long term infiltration from VC pipe.
- The Town of Spencer has hundreds of brick manholes. Manholes barrels, cones and corbels constructed with bricks and mortar and mortared in frames have known infiltration and inflow impacts that have not been successfully addressed by patch and seal rehabilitation methods. A removal and replacement program is the best program to address the long term infiltration from brick manholes and an aggressive program to keep covers raised, as part of repaving programs.
- Inflow removal program in private residences to remove foundation drains, sump pumps, etc. Though the Spencer Sewer Commission/Sewer Department has an aggressive removal program, this approach has had limited success for the Town of Spencer.

- The establishment of I/I mitigation contributions from new connections and increased flow sources wanting sewer capacity to help fund Spencer Sewer Commission sponsored I/I removal programs or direct assistance in removing I/I by designing, bidding and constructing, Spencer Sewer Commission approved, replacement sewers and manholes with known I/I impacts.

The sewer system capacity gained (credits) by implementing the above programs is accumulated in a municipal inflow/infiltration “Sewer Bank.”

## **THE SEWER BANK**

The Sewer Bank is an effective method of making needed municipal sewer system improvements while mitigating the burden of land development from the municipal sewer system. The Sewer Bank has been established by the Spencer Sewer Commission to address increased development interest and inquiries and to make needed municipal sewer system improvements. The Sewer Bank will be administered by the Wastewater Treatment Plant/Sewer Department Superintendent or anyone empowered by the Commission.

The MADEP’s “Guidelines for Performing Inflow/Infiltration Analyses and Sewer System Evaluation Surveys” includes guidance on estimating I/I component flows. For sump pumps and foundation drains, the DEP will allow 500 gpd @ 100% allocation. For all other inflow sources, the MADEP suggests using the average of the range of flows given in the guidance document. Furthermore, MADEP allows a 400% (4 parts I/I flow removal credit to 1 part proposed wastewater flow) allocation of the calculated daily capacity needs to be deposited into the Sewer Bank as I/I removal credits.

The system wide 1990 I/I Study conducted by the Spencer Sewer Commission identified areas of minor, moderate and severe I/I. The Study also identified areas of capacity deficiencies within the sewer system and areas that needed additional investigation. Toward that end, the Spencer Sewer Commission (SSC) may require a prospective Sewer Permit Applicant, requesting capacity for a new sewer service extension and/or sewer system connection(s), or additional capacity to an existing connection, to assist the Commission in determining the impact the additional wastewater flow from the sanitary sewer extension and/or connection(s) will have on the existing Spencer Sanitary Sewer System.

If the Commission does request assistance, the assistance will be in the form of: a field survey of a reach of the sanitary sewer system from the point(s) of the proposed sanitary sewer extension and/or connection(s) to a point on the sanitary sewer downstream identified by the Spencer Sewer Commission; and a fee to fund a limited modeling evaluation of the Spencer Sewer System, by the SSC's consultant, to determine: the existing sewer system capacity; the adequacy of the existing sewer line to accommodate the additional wastewater flow; bottlenecks at manholes; sewer segments (sewer lines between manholes) that require correction action in order to accommodate existing and proposed capacity; and locations for I/I removal and applicable I/I removal credits.

In general, I/I removal credits, for a new sewer service extension and/or sewer system connection(s), or additional capacity to an existing connection, are calculated based on the value of the additional wastewater capacity request times 4. I/I removal is calculated for sewer lines within a specific sewer line segment based on past or current sewer specific determined I/I values. If the total I/I removed, do to sewer line and manhole replacements needed to address capacity and/or hydraulic concerns, does not equal the total I/I removal credits then additional sewer line and manhole replacements will be assigned until the total I/I removal credits are obtained.

The SSC's may have the prospective Sewer Permit Applicant make a cash contribution per gallon of calculated I/I removal credit. Sewer Bank assets, from cash contributions, will help fund SSC sponsored I/I evaluation and rehab/removal programs. These programs usually grow slower and the removal of I/I from targeted locations takes longer.

The cash contribution is based on the estimated cost for the SSC to have replacement sewer and manhole projects designed, bid and constructed, divided by the inflow/infiltration removal credits. The value of the contribution may change by the SSC over time as the I/I removal cost database is expanded. The current cash contribution is \$4.00 per gallon of I/I removal credit.

The SSC's may also request, as a condition of the Sewer Permit, that the prospective Sewer Permit Applicant provide direct assist in removing I/I by designing, bidding and constructing replacement sewers and manholes, to SSC's Standards, identified in the evaluation, prior to commencing with his/her private development.



# TOWN OF SPENCER, MASSACHUSETTS

## OFFICE OF THE SEWER COMMISSION

FRANCIS X. WHITE, CHAIRMAN  
LAWRENCE H. DUFAULT, CLERK  
HAROLD J. MCAFEE, MEMBER

MARK R. ROBIDOUX, SUPERINTENDENT



3 OLD MEADOW ROAD  
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### AS-BUILT SANITARY SEWER SERVICE LOCATION REPORT (Version 1)

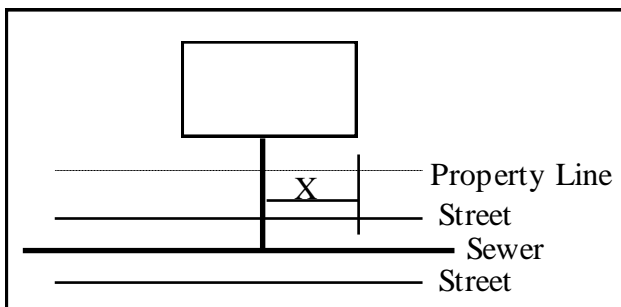
Property Owner: \_\_\_\_\_  
Number and Street: \_\_\_\_\_

The drain layer will file an As-built Sanitary Sewer Service Location Report showing the location of the existing sewer main, the new or repaired service connection, the building location and route of the building sewer service line. The minimum requirements for the Report are: the total length, type, diameter and depth of service line at the building and at the sewer main; connection at sewer main; pipe location ties at the foundation and sewer main; and the sewer main's connection distance from the nearest manholes on both sides.

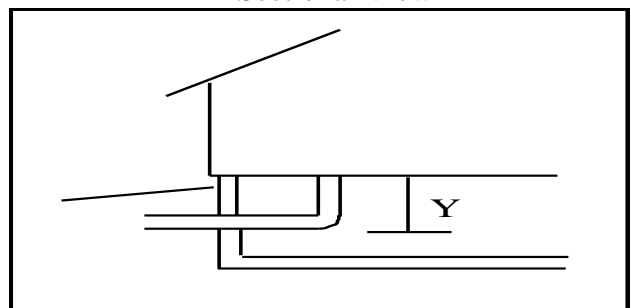
1. On the Plan View show sewer service connection entering home or building. Give dimension from the outside corner of the foundation to the point where the service connection goes through the foundation wall (Dimension X). Also show the distance from the foundation wall to the sewer main and state the depth from the pavement to the invert of the building sewer service.
2. On the Sectional View show the depth of the existing sewer below the top of the foundation (Dimension Y).

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Plan View



Sectional View



## AS-BUILT SANITARY SEWER SERVICE LOCATION REPORT

Project:	_____	Date:	_____
Date Installed:	_____	Street	_____
Type, Size of Service Pipe	_____	Dwelling No.	_____
Connection at Sewer Main	_____	Occupant	_____
Depth, Ends of Service	_____	Owner	_____
Length of Service Pipe Laid	_____	House No.	_____
Measured, Located By	_____	Complete	_____
Project Contractor	_____	In Complete	_____
Comments:	_____		

Observed By:

_____ Contractor	_____ (Date)
_____ Town of Spencer	_____ (Date)